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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/707,269 | 11/06/2000 | David K. Kaisaki | 53415USA8C.018 | 9169 |

7590 07/17/2002

Office of Intellectual Property Counsel
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EXAMINER

EVERHART, CARIDAD

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2825

DATE MAILED: 07/17/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/707,269

Applicant(s)

KAISAKI ET AL.

Examiner

Caridad M. Everhart

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-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-35 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 16-35 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- ☐ Interview Summary (PTO-413) Paper No(s). ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

Claim Objections

Claims 19 and 24 are objected to because of the following informalities: The first lines of the claims have been inadvertently obscured because the top margin of the pages did not allow adequate space for the punching of holes to place the pages in the case folder without placing holes in the print. Appropriate correction is required, and it is respectfully requested that a larger top margin be provided.

Specification

The disclosure is objected to because of the following informalities: The first lines of pages 10-64 of the specification have been inadvertently obscured by the placing of holes in the pages in the preparation for placing the pages in the file folder because the top margin was not adequate. In replacing the pages, a statement that no new matter has been added is requested

Appropriate correction is required, and it is respectfully requested that a larger top margin be provided.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

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were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 16-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hudson (US 5,972,792) in view of Kaufman, et al. (US 5,954,997).

Hudson discloses a method of polishing a substrate in semiconductor manufacturing in which a pad with a fixed abrasive (abstract). Hudson discloses a solution which includes oxidizer, complexing agent, and passivating agent (col. 4, lines 35-38 and 50-65). Among these, are agents recited in the instant claims: peroxide, benzotriazole, ammonia ferricyanide, nitric acid. The amounts are within the ranges recited in the instant claims. In addition, Hudson teaches using a known CMP solution, with the abrasive particles removed (col. 4, lines 45-49).

Although Hudson includes agents recited in the instant claims, Hudson is silent with respect to the including of all three of the agents in one solution.

Kaufman discloses a CMP slurry which includes all three of the agents recited in the instant claims (col. 5, lines 13-18, 43-48, 55-58, and 66-67; col. 6, lines 10-15). Among these are: benzotriazole, ammonium oxalate, hydrogen peroxide (col. 10, lines 18-22). Kaufman teaches other additives such as stabilizer may be used (col. 6, lines 46-50).

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One of ordinary skill in the art would have been motivated to have combined the disclosure made by Kaufman with that of Hudson because Hudson teaches that a known CMP solution with the particles removed may be used.

With respect to other limitations of the instant claims, such as particular compounds or the amounts of particles, it is believed to be within the ordinary skill in the art to use known compounds for the oxidant, the complexing agent and the passivating agent, as Kaufman teaches that other compounds may be used as the oxidizing agent, complexing agent, and passivating agent (col. 6, lines 33-35). With respect to the amounts of particles, Hudson teaches removing the particles.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Caridad M. Everhart whose telephone number is 703-308-3455. The examiner can normally be reached on Monday through Fridays 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S. Smith can be reached on 703-308-1323. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

7-8-02

C. Everhart
CARIDAD EVERHART
PRIMARY EXAMINER